UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,486	09/23/2003	Roger J. Jellicoe	CS21782RL	2945

20280 7590 10/04/2006

MOTOROLA INC
600 NORTH US HIGHWAY 45
ROOM AS437
LIBERTYVILLE, IL 60048-5343

EXAMINER	
YACOB, SISAY	
ART UNIT	**PAPER NUMBER**
2612	

DATE MAILED: 10/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/668,486	JELLICOE, ROGER J.	
	Examiner	Art Unit	
	Sisay Yacob	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 August 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5,7-11 and 22-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5,7-11 and 22-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1 This communication is in response to applicant's amendment to second non-final office action, which was filed August 01, 2006.

2 Arguments to rejected claims 1-3, 5, 7-11 and new claims 22-25 have been entered and made of record in the application of Jellicoe "Keypad for an electronic device" filed on September 23, 2003.

Claims 1, 5, 7 10, and 11 are as previously amended.

Claims 4, 6 and 12-21 are as previously canceled.

Claims 2, 3, 8 and 9 are the same as originally filed.

New claims 22-25 are introduced.

Claims 1-3, 5, 7-11 and 22-25 are pending.

Response to Arguments

3 Applicant's argument with respected to the pending claims 1-3, 5, 7-11and new claims 22-25 filed on August 01, 2006, have been fully considered but considered but they are not persuasive for at least for the following reasons.

4 On Page 7, Page 7 and all subsequent applicant's argument with respect to claims 1-3, 5, and 7-11, as to lack of motivation to combine the prior arts of Yu et al. (5,852,414) and Beers (5,007,008).

5 One skilled in the art would recognize the hardware means for key actuation of Yu et al., may be replaced or substituted by an equivalent software implementation (priority routine) of Beers, wherein "priority routine that enters a character associated with the first equivalence alphanumeric label when the first key is held for less than a first toggle period and enters a character associated with the second alphanumeric label when the first key is held for more than the first toggle period." Further, it is well known and widely used in the art to use equivalent software capability to replaced or substituted a hardware component in order to minimize size or increase functionality that may lead to improved consumer products.

Rejections - 35 USC § 103

6 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negatived by the manner in which the invention was made.

7 The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8 Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yu et al. US patent (5,852,414) in view of the US patent of Beers (5,007,008).

9 As to claim 1, Yu et al., discloses an electronic device with a keypad on a substantially planar surface (Abs; See figures 1-3) comprising a first key with an indented edge in the substantially planar surface (Key with Items 5, E, N and W of figure 2), a first protruded edge in the substantially planar surface (Edge below item N of figure 2), a first alphanumeric label associated with the first key (Item 5 of figure 2), and a second alphanumeric label associated with the first protruded edge of the first key (Item N of figure 2), a second key with a protruded edge in the substantially planar surface adjacent to the indented edge of the first key (Key with items 2, B, K and T of figure 2), a third key with an indented edge in the substantially planar surface adjacent to the first protruded edge of the first key (Key with items 8, H, Q and Z of figure 2). However, Yu

et al., does not expressly disclose a priority routine that enters a character associated with the first alphanumeric label when the first key is held for less than a first toggle period and enters a character associated with the second alphanumeric label when the first key is held for more than the first toggle period. In the same field of endeavor, Beers discloses a priority routine for electronic device that enters a character associated with an alphanumeric label when the key is held for less than a first toggle period (Col. 4, lines 37-44; Col. 5, lines 7-42; See figures 2 and 3).

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify the electronic device with a keypad of Yu et al., by incorporating a priority routine for electronic device with a keypad that enters a character associated with an alphanumeric label when the key is held for predetermined toggle period, as disclosed by Beers, in order to have an electronic device with a keypad wherein a priority routine that enters a character associated with the first alphanumeric label when the first key is held for less than a first toggle period and enters a character associated with the second alphanumeric label when the first key is held for more than the first toggle period, because Yu et al., discloses an electronic device with a keypad wherein the keys have multiple alphanumeric label and a user may enter any of the characters that are associated with the alphanumeric labels on each key and Beers discloses an electronic device with a keypad wherein the keys have multiple alphanumeric label and a user may enter any character based on a priority routine that enters a different character according to a toggle period of the key depressing. Furthermore, one skilled in the art would be motivated to combine the prior arts, because one practitioner in the

would recognize the hardware means for key actuation of Yu et al., may be replaced or substituted by an equivalent software implementation (priority routine) of Beers. Also, using an equivalent software capability to replaced or substituted a hardware component in order to minimize size or increase functionality that may lead to improved consumer electronic devices is well known and widely used in the art to.

As to claim 2, an electronic device according to claim 1, further, Yu et al., discloses wherein the first key further comprises a second protruded edge in the substantially planar surface (Edge below item E of figure 2), a third protruded edge in the substantially planar surface (Edge below item W of figure 2), however, Yu et al., in view of Beers does not expressly disclose an angle formed by lines between a center of the first protruded edge and centers of the second protruded edge and the third protruded edge is greater than approximately forty-five degrees.

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify electronic device with a keypad of Yu et al., and Beers, by adjusting the angle formed by lines between a center of the first protruded edge and centers of the second protruded edge and the third protruded edge, in order to have an angle formed by lines between a center of the first protruded edge and centers of the second protruded edge and the third protruded edge is greater than approximately forty-five degrees, because Yu et al., discloses different keys that have different angle formed by lines between the first protruded edge and the second protruded edge and the third protruded edge (Items 0-9 of figure 2; See Num Lock key of figure 2) and one of

ordinary skill in the art recognizes an angle may be formed by lines between a center of the first protruded edge and centers of the second protruded edge and the third protruded edge at various degrees.

11 As to claim 3, an electronic device according to claim 2, further, Yu et al., discloses the angle is less than approximately ninety degrees (Items 0-9 of figure 2; Num Lock key of figure 2).

12 As to claim 5, an electronic device according to claim 4, further, Yu et al., discloses the first alphanumeric label represents a number (Item 2 of figure 2).

13 As to claim 7, an electronic device according to claim 6, further, Yu et al., discloses the second alphanumeric label represents a non-numeric character (Item N of figure 2).

14 As to claim 8, an electronic device according to claim 7, further, Yu et al., discloses the second alphanumeric label represents a letter (Item N of figure 2).

15 As to claim 9, an electronic device according to claim 7, however, the combination of Yu et al., and Beers does not expressly disclose the second alphanumeric label represents a space.

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify the combination of Yu et al., and Beers, by incorporating alphanumeric label that represents a non-character for representing a space, in order to have the second alphanumeric label to represents a space, because Yu et al., and Beers, disclose alphanumeric labels that have different characters that allow user to enter the desire character and one of ordinary skill in the art recognizes a space may be incorporated to allow users to enter space between words and the alphanumeric label represents a space may be assigned to any of the second, third or fourth characters that are assigned to each key.

16 As to claim 10, an electronic device according to claim 4, further, Beers discloses the priority routine enters a character associated with the second alphanumeric label when the first key is held for less than a second toggle period that is greater than the first toggle period (Col. 4, lines 37-44; Col. 5, lines 7-42; See figures 2 and 3).

17 As to claim 11, an electronic device according to claim 10, however, Yu et al., in view of Beers does not expressly disclose the priority routine enters a character associated with a third alphanumeric label when the first key is held for more than the second toggle period.

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify the priority routine of Yu et al., and Beers, by adding a third toggle period, in order to have a priority routine enters a character associated with a third

alphanumeric label when the first key is held for more than the second toggle period, because Beers discloses a priority routine that enters a character associated with the first alphanumeric label when the first key is held for less than a first toggle period and enters a character associated with the second alphanumeric label when the first key is held for more than the first toggle period (Col. 4, lines 37-44; Col. 5, lines 7-42; See figures 2 and 3) and Yu et al., discloses an electronic device with a keypad wherein each key having four alphanumeric label and associated switches under each characters, so that a user may enter any one of the characters that are associated with the alphanumeric labels on each key. One ordinary skill in the art recognizes adding a priority routine to enter a character associated with a third alphanumeric label when the first key is held for more than the second toggle period is merely a repetition of the first two of toggle periods. Furthermore, one skilled in the art would be motivated to combine the prior arts, because it is well known and widely used in the art to use equivalent software capability to replaced or substituted a hardware component in order to minimize size or increase functionality that may lead to improved consumer electronic devices.

18 As to claim 22, Yu et al., discloses an electronic device with a keypad on a substantially planar surface (Abs; See figures 1-3) comprising a first key with, a first indented edge in the substantially planar surface (Key with labeled 5 the side E W of figure 2), a first protruded edge in the substantially planar surface (Edge below item N of figure 2), a second protruded edge in the substantially planar surface (Edge below item

E of figure 2), a third protruded edge in the substantially planar surface(Edge below item W of figure 2), a first alphanumeric label associated with the first key (Item 5 of figure 2), and a second alphanumeric label associated with the first protruded edge of the first key (Item N of figure 2), a second key with a protruded edge in the substantially planar surface adjacent to the first indented edge of the first key (Key with items 2, B, K and T of figure 2), and a third key with a protruded edge in the substantially planar surface adjacent to the second indented edge of the first key (Key with items 8, H, Q and Z of figure 2). However, Yu et al., does not expressly disclose a second indented edge in the substantially planar surface and a third indented edge in the substantially planar surface. But Yu et al., discloses different keys that have multiple indented edges (See figures 1 and 2).

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to arrange the electronic device with a keypad of Yu et al., to have a second indented edge and a third indented edge. One of ordinary skill in the art recognizes the keys may be arranged to any number of the key edges to be indented depending of the designer's choice.

19 As to claim 23, an electronic device with a keypad on a substantially planar surface (Abs; See figures 1-3) comprising a first key with a first indented edge in the substantially planar surface (Key with labeled 5 the side E W of figure 2), a first protruded edge in the substantially planar surface (Edge below item N of figure 2), a first switch associated with the first protruded edge (Switch item below N of figure 2; See

figure 3 for clearer view of switch), a second protruded edge in the substantially planar surface (Edge below item E of figure 2), a second switch associated with the second protruded edge (Switch item below E of figure 2; See figure 3 for clearer view of switch), a first alphanumeric label associated with the first key (Item 5 of figure 2), a second alphanumeric label associated with the first protruded edge of the first key (Item N of figure 2), a third alphanumeric label associated with the second protruded edge of the first key (Key with items 8, H, Q and Z of figure 2). However, Yu et al., does not expressly disclose and a first priority routine that enters a character associated with the first alphanumeric label when the first switch is held for less than a first toggle period, enters a character associated with the second alphanumeric label when the first switch is held for more than the first toggle period, enters a character associated with the first alphanumeric label when the second switch is held for less than the first toggle period, and enters a character associated with the third alphanumeric label when the second switch is held for more than the first toggle period. Beers discloses a priority routine for electronic device that enters a character associated with an alphanumeric label when the key is held for less than a first toggle period (Col. 4, lines 37-44; Col. 5, lines 7-42; See figures 2 and 3).

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify the electronic device with a keypad of Yu et al., by incorporating a priority routine for electronic device with a keypad that enters a character associated with an alphanumeric label when the key is held for predetermined toggle period, as disclosed by Beers, in order to have an electronic device with a keypad wherein a first

priority routine that enters a character associated with the first alphanumeric label when the first switch is held for less than a first toggle period, enters a character associated with the second alphanumeric label when the first switch is held for more than the first toggle period, enters a character associated with the first alphanumeric label when the second switch is held for less than the first toggle period, and enters a character associated with the third alphanumeric label when the second switch is held for more than the first toggle period, because Yu et al., discloses an electronic device with a keypad wherein the keys have multiple alphanumeric label and a user may enter any of the characters that are associated with the alphanumeric labels on each key and Beers discloses an electronic device with a keypad wherein the keys have multiple alphanumeric label and a user may enter any character based on a priority routine that enters a different character according to a toggle period of the key depressing. Furthermore, one skilled in the art would be motivated to combine the prior arts, because one practitioner in the would recognize the hardware means for key actuation of Yu et al., may be replaced or substituted by an equivalent software implementation (priority routine) of Beers. Also, using an equivalent software capability to replaced or substituted a hardware component in order to minimize size or increase functionality that may lead to improved consumer electronic devices is well known and widely used in the art to.

20 As to claim 24, an electronic device according to claim 23, however, Yu et al., in view of Beers does not expressly disclose wherein the priority routine enters a character

associated with a fourth alphanumeric label associated with the first protruded edge of the first key when the second switch is held for more than a second toggle period that is greater than the first toggle period.

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to arrange the priority routine of Yu et al., and Beers, by adding a priority routine enters a character associated with a fourth alphanumeric label associated with the first protruded edge of the first key when the second switch is held for more than a second toggle period that is greater than the first toggle period, because Beers discloses a priority routine that enters a character associated with the first alphanumeric label when the first key is held for less than a first toggle period and enters a character associated with the second alphanumeric label when the first key is held for more than the first toggle period (Col. 4, lines 37-44; Col. 5, lines 7-42; See figures 2 and 3) and Yu et al., discloses an electronic device with a keypad wherein each key having four alphanumeric label and associated switches under each characters, so that a user may enter any one of the characters that are associated with the alphanumeric labels on each key. One ordinary skill in the art recognizes adding a priority routine to enter a character associated with a third alphanumeric label when the first key is held for more than the second toggle period is merely a repetition of the first two of toggle periods. Furthermore, one skilled in the art would be motivated to combine the prior arts, because it is well known and widely used in the art to use equivalent software capability to replaced or substituted a hardware component in order to minimize size or increase functionality that may lead to improved consumer electronic devices.

21 As to claim 25, an electronic device according to claim 23, further, Beers discloses the electronic device further comprising a second priority routine that enters a character associated with the second alphanumeric label when the first switch is held for less than a first toggle period, enters a character associated with the first alphanumeric label when the first switch is held for more than the first toggle period, however, Yu et al., in view of Beers does not expressly disclose the electronic device enters a character associated with the third alphanumeric label when the second switch is held for less than the first toggle period, and enters a character associated with the first alphanumeric label when the second switch is held for more than the first toggle period.

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to arrange the priority routine of Yu et al., and Beers, by having an the electronic device further comprising a second priority routine that enters a character associated with the second alphanumeric label when the first switch is held for less than a first toggle period, enters a character associated with the first alphanumeric label when the first switch is held for more than the first toggle period, enters a character associated with the third alphanumeric label when the second switch is held for less than the first toggle period, and enters a character associated with the first alphanumeric label when the second switch is held for more than the first toggle period., because Beers discloses a priority routine that enters a character associated with the first alphanumeric label when the first key is held for less than a first toggle period and enters a character associated with the second alphanumeric label when the first key is

held for more than the first toggle period (Col. 4, lines 37-44; Col. 5, lines 7-42; See figures 2 and 3) and Yu et al., discloses an electronic device with a keypad wherein each key having four alphanumeric label and associated switches under each characters, so that a user may enter any one of the characters that are associated with the alphanumeric labels on each key. One ordinary skill in the art recognizes adding a priority routine to enter a character associated with a third alphanumeric label when the first key is held for more than the second toggle period is merely a repetition of the first two of toggle periods. Furthermore, one skilled in the art would be motivated to combine the prior arts, because it is well known and widely used in the art to use equivalent software capability to replaced or substituted a hardware component in order to minimize size or increase functionality that may lead to improved consumer electronic devices.

Conclusion

22 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sisay Yacob whose telephone number is (571) 272-8562. The examiner can normally be reached on Monday through Friday 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffery A. Hofsass can be reached on (571) 272-2981. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

23 Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sisay Yacob

09/30/2006

S.Y.

held for more than the first toggle period (Col. 4, lines 37-44; Col. 5, lines 7-42; See figures 2 and 3) and Yu et al., discloses an electronic device with a keypad wherein each key having four alphanumeric label and associated switches under each characters, so that a user may enter any one of the characters that are associated with the alphanumeric labels on each key. One ordinary skill in the art recognizes adding a priority routine to enter a character associated with a third alphanumeric label when the first key is held for more than the second toggle period is merely a repetition of the first two of toggle periods. Furthermore, one skilled in the art would be motivated to combine the prior arts, because it is well known and widely used in the art to use equivalent software capability to replaced or substituted a hardware component in order to minimize size or increase functionality that may lead to improved consumer electronic devices.

Conclusion

22 **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

23 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sisay Yacob whose telephone number is (571) 272-8562. The examiner can normally be reached on Monday through Friday 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffery A. Hofsass can be reached on (571) 272-2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sisay Yacob

09/30/2006

S.Y.

JEFFERY HOFSASS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600